

JLCA Corner

"LCA for Asian Countries" and "State-of-the-Art of LCA Activities in Japanese Industries"

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In the last week of January 2000, two symposiums related to LCA were held in Japan. One was for the "LCA for Asian Countries" which was held in Tokyo on January 24th. The other was for the "State-of-the-Art of LCA Activities in Japanese Industries" which was held in Tsukuba on January 25th. In this paper, the outline of these two symposiums is described.

LCA for Asian Countries

The Japanese Environmental Management Association for Industry (JEMAI) organized this symposium. The number of participants at this symposium was about 100. This symposium consisted of 6 keynote lectures and a panel discussion. Two of the keynote speakers were invited from Asian countries: Professor Tak Hur, Konkuk University, Korea and Dr. Shen-yann Chiu, Taiwan Environmental Management Association, Taiwan.

In the keynote lecture, Professor Yamamoto of Tokyo University introduced the establishment of the Green Productivity Association. Dr. Matsuno of the National Institute for Resources and Environment (NIRE), MITI briefly reported LCA activities in Asian countries, i.e. China, Malaysia, and India. He emphasized the necessity of the future collaboration within the institutes of Asian countries for the development of a public database for life cycle inventory analysis and life cycle impact assessment methodology that are applicable in Asian countries.

Professor Tak Hur of Konkuk University explained the organization and activities of the Korean Society for LCA (KSLCA), the 5-year national LCA research project (1998-2003) and the status of LCA in Korean industries. His conclusion was that persistent efforts by government, industry, academia, and KSLCA have to be continued in order to develop and promote a more Korean version of LCA and to utilize the LCA results in various fields such as the establishment of environmental regulation and policies, public relations and education, the integration with EMS and linking to the DfE.

Dr. Shen-yann Chiu of the Taiwan Environmental Management Association presented the driving force for the development of LCA in Taiwan, the roles of government agencies, some LCA case studies, and other activities in Taiwan. He provided the following recommendations to speed up the promotion and implementation of LCA in Taiwan: 1) LCA programs sponsored by government agencies, 2) establishment of a robust LCI system useful for the domestic sectors, 3) awareness promotion on LCA among key industries and government agencies, 4) numerous incentives such as technical assistance, information service, training, technology demonstration and financial benefits provided by government agencies.

Mr. Kimura of HITACHI presented the "3R (Reduce, Reuse and Recycle)" activities in his company and electronic industries. Mr. Uematsu of the Metal Mining Association of Japan (MMAJ) presented their activities related to environmental protection in mining industries and LCA activities in APEC/GEMEED (APEC Expert Group on Minerals and Energy Exploration and Development).

In a panel discussion, the following things were pointed out: 1) Necessity of co-sharing data for the development of a public LCI database in Asian countries, 2) Great effort should be made for the facilitation of discussions in order to increase an understanding of LCA. 3) Necessity of governmental leadership to promote LCA.

State-of-the-Art of LCA Activities in Japanese Industries

National Institute for Resources and Environment (NIRE). MITI organized this symposium. The participants in this symposium amounted to about 200. This was a one day symposium consisting of keynote lectures in the morning and a technical session in the afternoon. Two of the keynote speakers were invited from Europe, Mr. Goedkoop of PRé Consultants, the Netherlands and Mr. Walser of Sinum AG, Switzerland.

In the keynote lecture, Ms. Yamato presented TOYOTA Motors' LCA activities, focusing on the organization and activities of an LCA committee in the company, a recycling model and the method for data collection. She also presented one of the LCA case studies for normal vehicles and a hybrid type vehicle. Mr. Goedkoop presented the Eco-indicator Impact Assessment method for Eco-design that was developed during last year. He focused on the weighting method, damage model, inventory of the processes and uncertainty. Mr. Walser presented a new tool called "EcoPerformance Profile (EPP)" that combines EMS with LCA in an effective way. He also showed case studies in which EPP was applied to the Swiss Printing Industry.

In the technical session, five different LCA software packages were demonstrated: 1) Easy-LCA by TOSHIBA Engineering Corporation, 2) Gabi3 by PE Asia, 3) LCASUPPORT by NEC Software KANSAI, 4) TEAM™ by Ecobilan Japan, and 5) NIRE-LCA ver.3 by NIRE. The structure of a database in the software was explained. Easy-LCA contains the LCI database developed with an Economic Input-Output table. The other software contains the database based on a sum-up method. Characteristics and functions of the software were also presented.

In the last of the technical sessions, Dr. Yano of JEMAI presented the recent progress of the LCA national project in Japan.